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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/773,935	02/02/2001	Jae Sung Kim	YHK-062	7194

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EXAMINER
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SAID, MANSOUR M

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/10/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/773,935

Applicant(s)

KIM ET AL.

Examiner

MANSOUR M SAID

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-21 is/are allowed.
- 6) ☒ Claim(s) 1-7, 22 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

- 1. The following is a quotation of the second paragraph of 35 U.S.C. 112:**

**The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

- 2. Claim 22 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**
- 3. Claim 22, recited "each sustaining electrode extending ... above and below". The claimed limitations is not clear that how a single sustaining electrode can be above and below at the same time. Correction is needed.**

### ***Claim Rejections - 35 USC § 103***

- 4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:**

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- 5. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Prior Art (hereinafter referred to as APA) in view of Kuriyama et al. (6,104,362; hereinafter referred to as Kuriyama).**

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**As to claim 1**, APA teaches a plasma display panel (PDP, (figure 2, (40)) having discharge cells (discharge cell, (figure 2, (44)) arranged in a matrix type (specification page 1), comprising sustaining electrodes (scanning and common electrodes, (figure 1, (16 & 17)) formed at the boundary portions between the discharge cells (specification pages 1-2).

APA does not expressly disclose that trigger electrodes formed at the inner sides of the discharge cells.

However, Kuriyama teaches a trigger electrode (Y electrode, (figure 2, (22a)) formed at the inner sides of the discharge cells (sustaining discharge, (figure 2)) (column 7, lines 10-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Kuriyama's teaching into APA's PDP display so as to increase the versatility of the display device.

**As to claim 2**, Kuriyama teaches that the trigger electrodes (Y electrode, (figure 2, (22a)) are adjacent to any one of the sustaining electrodes (X electrode, (figure 2, (12)) formed at the boundary portions where they are formed (column 7, lines 10-17).

**As to claim 3**, Kuriyama teaches that the sustaining electrodes (X electrode, (figure 2, (12)) and the trigger electrodes (X electrode, (figure 2, (12)) are transparent electrodes (ITO, transparent conducting membrane) (column 7, lines 10-21)

**As to claim 6**, APA teaches that first barrier ribs (barrier ribs, (figure 1, (32)) arranged in a direction crossing the sustaining electrodes (on page 2, APA clearly stated "the barrier ribs (figure 1, (32)) arranged in parallel to the address electrode (figure 1, (24))", since sustaining electrode and address electrode are crossing each other, therefore, APA fairly shows that (the

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barrier ribs, (figure 1, (32) arranged in a direction crossing the sustaining electrodes (scanning/common electrodes, (figure 1, (16-17) (specification page 2, lines 25-37).

**6. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kuriyama as applied to claim 1 above, and further in view of Ishii et al. (6,531,995 B2; hereinafter referred to as Ishii).**

As to claim 4, APA and Kuriyama disclose all claimed limitation in claim 4 except that an electrode formed from a conductive material having a light-shielding property at the centers of the sustaining electrodes and the sustaining electrodes.

However, Ishii teaches an electrode (metal electrode, (figure 19, (132)) formed from a conductive material (metal such as, copper) having a light-shielding property at the centers of the sustaining electrodes (transparent electrode, (figure 19, (132)) and the sustaining electrodes (transparent electrode, (figure 19, (132)) (column 10, lines 25-40 and column 19, lines 14-38).

Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to combine Ishii's teaching having conductive material at the center of the electrode(s) into APA modified system so as to increase the versatility of the display device.

As to claim 5, Ishii teaches that first barrier ribs (partitioning walls, (figure 30, (177-177)) arranged in parallel to the sustaining electrodes (glass substrate) (column 1, lines 35-50).

**7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over APA in view of Kuriyama as applied to claim 6 above, and further in view of Matsuzaki et al. (5,939,828).**

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APA, Kuriyama and Ishii disclose all claimed limitation in claim 7, but omit that the first barrier ribs overlap with the bus electrodes

However, Matsuzaki discloses that the first barrier ribs overlap with the bus electrodes (figures 5a, 7a & 8a, column 15, lines 1-16 and column 16, lines 1-30).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have Matsuzaki's device having overlap barrier ribs with electrode(s) into APA's modified so as to prevent a reduction in the degree of opening in the display cell (column 16, lines 15-20).

**As to claim 22,** As best understood, APA teaches a plasma display panel (PDP, (figure 2, (40)), comprising sustaining electrodes (scanning and common electrodes, (figure 1, (16 & 17) at the boundary of discharge cells, each sustaining electrode (scanning and common electrodes, (figure 1, (16 & 17) extending into the discharge cells adjacent above and below (specification pages 1-2).

APA does not expressly disclose that trigger electrodes formed in the discharge cell.

However, Kuriyama teaches a trigger electrode (Y electrode, (figure 2, (22a)) formed in the discharge cells (sustaining discharge, (figure 2)) (column 7, lines 10-17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Kuriyama's teaching into APA's PDP display so as to increase the versatility of the display device.

**As to claim 23,** wherein the trigger electrode (Y electrode, (figure 2, (22a)) is near to any one of sustaining electrodes positioned (X electrode, (figure 2, (12)) in each discharge cell (sustaining discharge, (figure 2)) (column 7, lines 10-17).

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection.

It is noted that all claims have the limitation "trigger electrode". However, the claims have not clearly stated the "trigger electrode", therefore, Examiner considered any electrode including common electrode as a "trigger electrode".

***Allowable Subject Matter***

9. **Claims 8 to 21 are allowed.**

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Mizobata (6,407,503 B1) teaches a three-electrode AC type plasma display panel.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS OFFICE ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

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will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Mansour M. Said** whose telephone number is **(703) 306-5411**.

The examiner can normally be reached on Monday through Thursday from 8:30 a.m. to 6:00 p.m. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Shalwala Bipin**, can be reached at **(703) 305-4938**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)



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13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer service Office whose telephone number is (703) 306-0377.

March 7, 2004

**Mansour M. Said**



**BIPIN SHALWALA**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600